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| 10/721,198      | 11/25/2003  | Ching-Yao Chung      | 1970-5              | 5511             |

7590

09/16/2005

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EXAMINER

WHITMORE, STACY

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/721,198

Applicant(s)

CHUNG ET AL.

Examiner

Stacy A. Whitmore

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on preliminary amendment dated 11/25/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The abstract of the disclosure is objected to because the abstract dated 11/25/2003 appears to be missing at least the first section or is not on a separate single sheet. Correction is required. See MPEP § 608.01(b).

#### Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. As for claims 4 and 5, line 2, the term "the conductive wire" is unclear because the language is not clear as to whether or not applicant means to claim a specific one of the plurality of conductive wires or not. Clarify

#### Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international

application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 4-5, and 7-8, 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Ratchkov (US PG-Pub 2004/0085099) .

5. As for claims 1-2, 4-5, and 7-8, and 10-12, Ratchkov discloses a power supply layout for an IC, comprising:

A plurality of power pads [fig. 1, pgs. 1-2, paragraphs 0001-0013; pg. 3, paragraphs 0034-0035, pg. 4];

A plurality of ground pads [fig. 1, pgs. 1-2, paragraphs 0001-0013; pg. 3, paragraphs 0034-0035, pg. 4];

A plurality of conductive wires directly connected to the power pads or the ground pads [fig. 1, pgs. 1-2, paragraphs 0001-0013; pg. 3, paragraphs 0034-0035, pg. 4]; and

A core circuit electrically connected to the conductive wire to acquire power; wherein the IC is comprised of a plurality of metal layers, the power pads and the conductive wires connected to the power pads are positioned at the same/different metal layer(s), and the ground pads and the conductive wires connected to the ground pads are positioned at the same/different metal layer(s) [fig. 1, pgs. 1-2, paragraphs 0001-0013; pg. 3, paragraphs 0034-0035, pg. 4];

Wherein the conductive wires comprise a plurality of first wires [fig. 1, pgs. 1-2, paragraphs 0001-0013; pg. 3, paragraph 0035, pg. 4]; a plurality of second wires arranged with the plurality of first wires in a mesh manner [fig. 1, pgs. 1-2, paragraphs 0001-0013; pg. 3, paragraphs 0034-0035, pg. 4];

Wherein the plurality of conductive wires are straight and one end (both ends) of the conductive wire is/are electrically connected to the power pad or the ground pad (around the core circuit) directly [fig. 1, pgs. 1-2, paragraphs 0001-0013; pg. 3, paragraphs 0034-0035, pg. 4];

Wherein the power pad and first type conductive wire are electrically connected to a positive potential, while the ground pad and the second type conductive wire are electrically connected to a ground potential [fig. 1, pgs. 1-2, paragraphs 0001-0013; pg. 3, paragraphs 0034-0035, pg. 4];

[Note – the power mesh structure of Ratchkov discloses the mesh wherein the power and/or ground pads are connected either on the same layer or different layer than the power and/or ground wires in order for the circuit to provide either the first or second layer to alternately be used as the power or ground layer, depending on the use, the circuit can be configured to operate with the power or ground layer on top or bottom of the other – especially look at paragraphs 0013, 0034, 0035; also the pads are directly connected to the wires because the straps and or vias are just conductive material and inherently just a conductive connection to the pads; the auxiliary wire is the ]

#### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ratchkov (US Patent Application Publication 2004/0085099) in view of Jetton (US Patent 6,675,139).

7. As for claims 6 and 13, Ratchkov discloses the invention substantially as claimed including the power supply layout as cited above in the rejection of claims 1-2, 4-5, and 7-8, 10-12.

Ratchkov does not specifically disclose wherein the power pads and the ground pads or (power pads) are positioned around the core circuit in a different pitch manner.

Jetton discloses wherein the power pads and the ground pads or (power pads) are positioned around the core circuit in a different pitch manner [col. 11, lines 39-44].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ratchkov and Jetton because adding Jettons positioning of ground/power pads at a different pitch manner would have improved Ratchkov's system by providing an alternate way of controlling factors such as voltage drop, current consumption, and noise which would improve overall circuit performance [see Jetton, col. 11].

8. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ratchkov (US Patent Application Publication 2004/0085099) in view of Ho (US Patent Application Publication 2003/0201472).

9. As for claims 3 and 9, Ratchkov discloses the invention substantially as claimed including the power supply layout as cited above in the rejection of claims 1-2, 4-5, and 7-8, 10-12.

Ratchkov does not specifically disclose at least one auxiliary wire electrically connected to the first wires, wherein both ends of the at least one auxiliary wire are not connected to the power pad or the ground pad.

Ho discloses at least one auxiliary wire electrically connected to the first wires, wherein both ends of the at least one auxiliary wire are not connected to the power pad or the ground pad [figs. 2 and 8, and paragraphs 0016-0017].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ratchkov and Ho because providing signal and/or shielding mesh lines that are connected to the first wire and not the pads would have provided additional circuitry for Ratchkov's system to prevent noise or crosstalk which would improve circuit performance [see Ho, figs. 2 and 8, and paragraphs 0016-0017].

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stacy A. Whitmore whose telephone number is (571) 272-1685. The examiner can normally be reached on Monday-Thursday, alternate Friday 6:30am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stacy A Whitmore  
Primary Examiner  
Art Unit 2825

A handwritten signature in black ink, appearing to read 'SAW', is located at the bottom right of the page.